

N^o 5414



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COMPLETE SPECIFICATION.

**Improvements in Ventilating, Humidifying, Warming and Cooling,
and Disinfecting Apparatus.**

I, HENRY SIDEBOTTOM, of Flixton Road, Urmston, in the County of Lancaster, Hydraulic Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 My object is to form a ventilating and humidifying apparatus of a more convenient form and at less cost than has heretofore been done.

This I accomplish by fitting within a suitable trunk or shaft, a suitable circular air fan.

10 This fan is driven by means of a small jet or jets of pressure water caused to play upon the sides of the blades of the fan.

I prefer to use two jets, one above and one below, the fan, by the use of one or other of which, the direction of the rotation of the fan may be changed, so as to inject, or eject, air as required.

15 The water is driven from the fan into the air in the trunk in the form of fine spray and its admission into the place ventilated can be regulated by means of screens made of wire gauze or other suitable material so as to give any desired degree of humidity to the air injected.

By warming or cooling the water used to drive the fan, I am also able to warm or cool the air injected to any temperature desired.

20 The sprayed water is also very effective in washing and cleansing the air injected, and it is apparent that by a suitable admixture of chemicals the air can be efficiently disinfected in its passage either outwards or inwards.

Fig. 1 shows a cross section of my apparatus in its simplest form, *a* indicating Referring to the drawings sent herewith:

25 *a* a suitable trunk or shaft in which is fitted circular fan *b* actuated by jets from nozzles *c* and *d* which play, according to the direction in which it is desired to drive the fan, upon the upper or lower side respectively, of blades *e*.

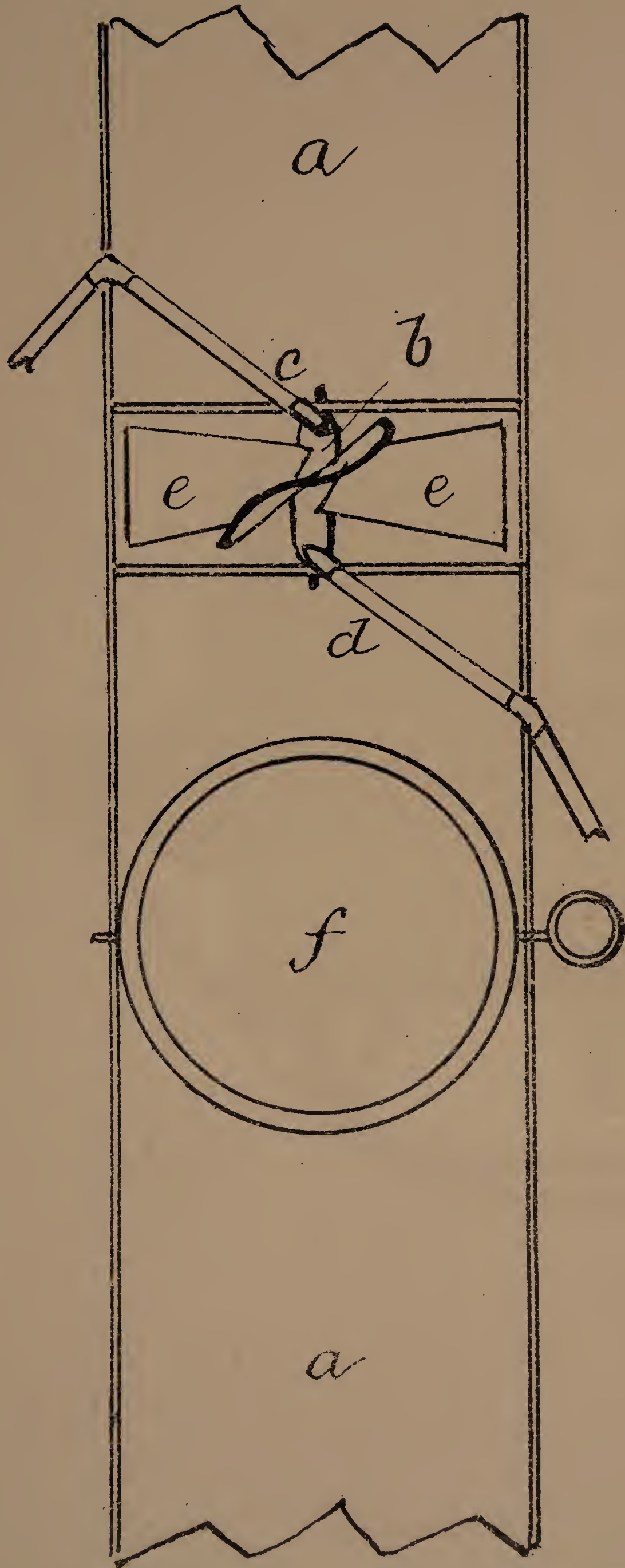
f indicates a moveable gauze screen for use in regulating the degree of humidity.

30 Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

The combined apparatus substantially as described and shown hereinbefore and in the accompanying drawings, for the purpose set forth.

35 Dated this 10th day of March 1899.

JOHN HENRY TOPHAM,
7, South Corridor, Royal Exchange, Manchester,
Agent to Applicant.



[This Drawing is a full-size reproduction of the Original.]

